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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,054	11/14/2001	Aref Ben Ahmed Jallouli	ESSR:058US/MBW	4850

7590 10/18/2007
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EXAMINER

SERGEANT, RABON A

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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10/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/992,054	Applicant(s) JALLOULI ET AL.	
	Examiner Rabon Sergeant	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-24, 28-40, 42, 43, 45 and 46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-24, 28-30, 33-35, 38-40, 42, 43, 45 and 46 is/are rejected.
- 7) ☒ Claim(s) 31, 32, 36 and 37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Claims 28, 39, 45, and 46 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The diiso(thio)cyanate polysulfide prepolymer of claim 45 cannot exist at the lower end of the claimed molecular weight range. The total of only the two isocyanate groups and two sulfide groups substantially exceeds the minimum molecular weight endpoint. Accordingly, since the prepolymer cannot exist over the full scope of the claimed molecular weight range, the position is taken that these embodiments fail to meet the written description requirement. Furthermore, with respect to claim 46, it is unclear that support exists for a prepolymer, as claimed, having a molecular weight of 148 g/mol that consists only of two isocyanate groups and two sulfur atoms. Such a molecular weight does not provide for the presence of any connecting hydrocarbon groups.

Furthermore, the first polysulfide prepolymer of claim 28 similarly fails to meet the written description requirement, because the lower end of the average molecular weight range cannot be obtained even when the values of x and y are 1 or less.

2. Claims 28, 39, 45, and 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The subject matter of claim 45 renders the claim indefinite, because the diiso(thio)cyanate polysulfide prepolymer cannot exist at the lower end of the claimed molecular

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weight range. The total of only the two isocyanate groups and two sulfide groups substantially exceeds the minimum molecular weight endpoint.

Furthermore, with respect to claim 46, the subject matter renders the claim indefinite, because it is unclear that the claimed prepolymer can exist if it has a molecular weight of only 148 g/mol. Such a molecular weight does not provide for the presence of any connecting hydrocarbon groups.

Furthermore, the first polysulfide prepolymer of claim 28 renders the claim indefinite and fails to further limit claim 22, because the lower end of the average molecular weight range cannot be obtained even when the values of x and y are 1 or less.

3. The examiner has considered applicants' response to the 35 USC 101 rejection and the 35 USC 112 rejections; accordingly, the 35 USC 101 rejection has been withdrawn. However, the 35 USC 112 rejections have been maintained. The fact remains that the claims set forth limitations that are considered to be essentially mutually exclusive. Despite applicants' remarks, consideration of the claims requires that limitations be disregarded. Aside from the obvious incongruity, it cannot be clearly determined which of the conflicting limitations takes precedence. Lastly, despite all of applicants' arguments, applicants have failed to explain how the low molecular weight prepolymers, as claimed, can exist. The examiner is simply seeking clarification with respect to exactly what the claims are to encompass.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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5. Claims 22-24, 28-30, 33-35, 38, 40, 42, 45 and 46 are rejected under 35 U.S.C. 102(a) as being anticipated by WO 01/36508.

The reference discloses an optical polymerizate, suitable for the production of optical lens material having a refractive index that exceeds that claimed, wherein the polymerizate is produced from an isocyanate functional prepolymer and an aromatic primary diamine, wherein the reactants contain sulfur atoms. See abstract, pages 3-23, and claim 7. Furthermore, with respect to claim 28, there is no requirement that x or y not be zero; therefore, when x is zero, the resulting prepolymer would be satisfied by an oligomer of 2,2'-thiodiethanethiol. See claim 7.

6. Claims 22-24, 28-30, 33-35, 38, 40, 42, 43, 45 and 46 are rejected under 35 U.S.C. 102(a) as being anticipated by WO 01/36507.

The reference discloses an optical polymerizate, suitable for the production of optical lens material having a refractive index that exceeds that claimed, wherein the polymerizate is produced from an isocyanate functional prepolymer and an aromatic primary diamine, wherein the reactants contain sulfur atoms. See abstract, pages 3-24, and claim 7. Furthermore, with respect to claim 28, there is no requirement that x or y not be zero; therefore, when x is zero, the resulting prepolymer would be satisfied by an oligomer of 2,2'-thiodiethanethiol. See claim 7.

7. Applicants' response, filed August 9, 2007, to the prior art rejections has been carefully considered; however, the response is insufficient to overcome the rejections. In accordance with the examiner's previous position, applicants' argued definition of prepolymer allows for the prepolymer to be an oligomer, and it is noted that claim 7 of the references specifically allows for oligomers of the specified thiols, and the position is taken that such oligomers would inherently encompass polysulfides that satisfy applicants' claims. Despite applicants' remarks,

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applicants have not conclusively established that the disclosed oligomers are not within or encompassed by the argued prepolymers. While applicants' remarks are drawn to those citations of the references that are drawn to the production of disulfide containing compounds, it is noted that the references are by no means limited to compounds containing such disulfide linkages.

For example, the references disclose at page 6 that polythiol reactants may contain sulfide linkages and polysulfide linkages, wherein the number of sulfur atoms may exceed two.

Accordingly, the position is taken that one would immediately envisage from the teachings of the references thiol reactants that satisfy applicants' claimed thiol reactants. The position is further taken that applicants' interpretation of the references is far more limited than the interpretation that would be ascribed to the references by the skilled artisan. Applicants' arguments completely ignore the aforementioned teachings of the references that state that the polythiol may have structures other than disulfide linkages. Furthermore, applicants argue that the oligomers of the reference necessarily possess disulfide linkages; however, this is not supported by the references. While there are disclosed oligomers that possess disulfide linkages, there is no disclosure that establishes that all disclosed oligomeric compounds must or necessarily possess disulfide linkages. Furthermore, applicants' arguments fail to address the fact that applicants' cited language, itself, clearly indicates that the formation or use of disulfide containing compounds is not absolute. Applicants' attention is directed to the cited language within page 17 of their response that states, "Such an oxidative coupling can result ..." and "The polythiol monomer used to prepare the polycyanate reactant may be a polythiol oligomer having disulfide linkages ...". It is submitted that language denoted by "can" and "may be" cannot be considered to be absolute, rather such language sets forth optional or possible permutations.

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8. Claims 31, 32, 36, and 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

R. Sergent
October 13, 2007


RABON SERGENT
PRIMARY EXAMINER